

Claims:

Please amend the claims as follows:

1. (Currently Amended) A method of interfacing with network management information on a network device, comprising:
 - receiving a non-object oriented management information database (MIB) at ~~a compiler of~~ a network device, the non-object oriented MIB including information related to one or more aspects of the network device;
 - extracting a subset of information from the non-object oriented MIB describing at least one aspect of the network device by lexically recognizing a set of tokens corresponding to a set of network parameters that describes aspects of the network device and parsing the tokens according to a hierarchical relationship between the set of network parameters; and
 - producing an object-oriented interface, for use by an object-oriented application to access the subset of information in the non-object oriented MIB, by generating a set of object-oriented classes and object-oriented methods corresponding to the set of tokens ~~subset of information in the non-object oriented MIB~~.
2. (Previously presented) The method of claim 1, wherein information in the non-object oriented MIB corresponds to a set of network parameters organized in a hierarchy and used to describe aspects of the network device.
3. (canceled)
4. (Previously presented) The method of claim 1, wherein a relationship among the object-oriented classes is a hierarchy that corresponds to the non-object oriented MIB.

1 5. (Original) The method of claim 1, wherein the methods generated include
2 methods capable of accessing and manipulating objects instantiated
3 from at least one of the object-oriented classes.

1 6. (Previously presented) The method of claim 5, wherein the methods
2 include one or more of the operations used to operate on the non-object
3 oriented MIB.

1 7. (Previously presented) The method of claim 6, wherein the operations
2 used to operate on the non-object oriented MIB are selected from a group
3 of operations including get, set, and test of SNMP (simple network
4 management protocol) variables.

1 8. (Currently amended) A method of interfacing with network management
2 information on a network device, comprising:
3 providing a non-object oriented management information database
4 (MIB) including information related to one or more aspects of a network
5 device;

6 extracting a set of tokens from the information, the set of tokens
7 corresponding to a set of network parameters describing the network
8 device; and

9 using a set of object-oriented classes and object-oriented methods
10 to access the non-object oriented MIB and the information set of tokens
11 corresponding to a set of network parameters describing related to one or
12 more aspects of the network device.

1 9. (Previously presented) The method of claim 8, wherein information in the
2 non-object oriented MIB corresponds to a set of network parameters
3 organized in a hierarchy and capable of describing aspects of the network
4 device.

1 10. (Previously presented) The method of claim 8, wherein a relationship
2 among the object-oriented classes is a hierarchy that corresponds to the
3 non-object oriented MIB.

1 11. (Original) The method of claim 8, wherein the object-oriented methods
2 are capable of accessing and manipulating objects instantiated from at
3 least one of the object-oriented classes.

1 12. (Previously presented) The method of claim 11, wherein the object-
2 oriented methods correspond to one or more of the operations used to
3 operate on the non-object oriented MIB.

1 13. (Previously presented) The method of claim 12, wherein the one or more
2 operations used to operate on the non-object oriented MIB are selected
3 from a group of operations including get, set, and test of SNMP (simple
4 network management protocol) variables.

1 14. (Currently amended) An apparatus to interface with network
2 management information on a network device, comprising:
3 a receiver module configured to receive a non-object oriented
4 management information ~~database~~ (MIB) including information related to
5 one or more aspects of the network device;
6 an extraction module configured to extract a subset of information
7 from the non-object oriented MIB describing at least one aspect of the
8 network device, wherein the extraction module extracts information from
9 the non-object oriented MIB by lexically recognizing a set of tokens
10 corresponding to a set of network parameters describing the network
11 device and parsing the tokens according to a hierarchical relationship
12 between the set of parameters; and

13 a generation module configured to produce an object-oriented
14 interface, for use by an object-oriented application to access the subset
15 of information in the non-object oriented MIB, by generating a set of
16 object-oriented classes and object-oriented methods corresponding to the
17 set of tokens ~~subset of information in the non-object oriented MIB.~~

1 15. (Previously presented) The apparatus of claim 14, wherein information in
2 the non-object oriented MIB corresponds to a set of network parameters
3 organized in a hierarchy and used to describe the network device.

1 16. (canceled)

1 17. (Previously presented) The apparatus of claim 14, wherein the
2 relationship among the object-oriented classes is a hierarchy that
3 corresponds to the non-object oriented MIB.

1 18. (Original) The apparatus of claim 14, wherein the object-oriented
2 methods generated include object-oriented methods capable of accessing
3 and manipulating objects instantiated from at least one of the object-
4 oriented classes.

1 19. (Previously presented) The apparatus of claim 18, wherein the object-
2 oriented methods include one or more of the operations used to operate
3 on the non-object oriented MIB.

1 20. (Previously presented) The apparatus of claim 19, wherein the
2 operations used to operate on the non-object oriented MIB are selected
3 from a group of operations including get, set, and test of SNMP (simple
4 network management protocol) variables.

1 21. (Currently amended) An apparatus for interfacing with network
2 management information on a network device, comprising:

3 a first storage area configured to store a non-object oriented
4 management information base (MIB) including information related to one
5 or more aspects of a network device, the information including a set of
6 tokens corresponding to a set of network parameters describing the
7 network device; and

8 a second storage area configured to store a set of object-oriented
9 classes and object-oriented methods that is used to access the non-
10 object oriented MIB and the ~~information~~ set of tokens corresponding to
11 the set of network parameters describing ~~related to one or more aspects~~
12 of the network device.

1 22 - 23. (Canceled)

1 24. (Currently amended) An apparatus for interfacing with network
2 management information on a network device, comprising:

3 means for receiving a non-object oriented management information
4 database (MIB) including information related to one or more aspects or a
5 network device;

6 means for extracting a subset of information from the non-object
7 oriented MIB describing at least on aspect of the network device, wherein
8 the extraction means extracts information from the non-object oriented
9 MIB by lexically recognizing a set of tokens corresponding to a set of
10 network parameters describing the device and parsing the tokens
11 according to a hierarchical relationship between the set of network
12 parameters; and

13 means for producing an object-oriented interface, for use by an
14 object-oriented application to access the subset of information in the
15 non-object oriented MIB, by generating a set of object-oriented classes

and object-oriented methods corresponding to the lexically recognized
and parsed tokens ~~subset of information in the non-object oriented MIB.~~

25. (Cancelled)

26. (Currently amended) A method of interfacing with network management
information on a network device, comprising:

adding a new network device to a network of one or more network
devices, the new network device and each of the one or more network
devices having one or more network management parameters stored in a
non-object oriented management information ~~database~~ (MIB);

distributing an object-oriented network management application to
the new network device from the one or more network devices, the object-
oriented network management application operable to generate an
object-oriented request for one or more network parameters stored in a
non-object oriented MIB;

determining that the network management application is
requesting one or more network parameters stored locally in the non-
object oriented MIB of the new network device;

creating a native variable interface, the native variable interface
being an object-oriented application interface that provides direct access
to the one or more network parameters stored locally using object-
oriented classes and methods; and

accessing the one or more network parameters stored locally
through the native variable interface.

27. (Previously presented) The method of claim 26, wherein the step of
creating a native variable interface includes initially accessing indirectly
one or more network parameters stored locally that describe features of
the new network device using a loopback address of the new network

5 device, including sending an simple network management protocol
6 (SNMP) protocol data unit (PDU) to the loopback address of the new
7 network device, the SNMP PDU to retrieve the one or more network
8 parameters stored locally that describe features of the new network
9 device, and using the features of the new network device to customize the
10 native variable interface.

1 28. (Previously presented) The method of claim 27, wherein the step of
2 sending an SNMP PDU to the new type of network device includes using
3 an SNMP stack associated with the new network device.

1 29. (Previously presented) The method of claim 27, wherein the step of
2 accessing indirectly one or more network parameters stored locally that
3 describe features of the new network device includes generating an
4 object-oriented method call for the one or more network parameters
5 stored locally that describe features of the new network device, and
6 converting the object-oriented method call into the SNMP PDU.

1 30. (Previously presented) The method of claim 29, wherein the SNMP PDU
2 includes one or more SNMP operations selected from the group of get, set
3 and test.